WO 2005/049209 PCT/FI2004/000694

6

Claims

- 1. A pipette, which is fitted with a tip for a liquid to be drawn therein by means of a plunger and which has a tip removing mechanism for disengaging the tip, said tip removing mechanism comprising a remover element (6.1, 7.1; 6.3, 7.3) which, upon moving it against the tip, disengages the tip, characterized in that the tip removing mechanism further comprises a ramp member (15.1; 15.2; 15.3), which is rotatable and which has a circle-forming ramp surface, including one or more segments within which the ramp surface has a high point and a low point, whereby the ramp surface, upon rotating through a single segment, forces the remover element (6.1, 7.1; 6.3, 7.3) first to move against the tip and then allows it to return.
- 2. A pipette as set forth in claim 1, wherein the ramp member (15.1; 15.3) has a ramp surface with a single segment.
- 3. A pipette as set forth in claim 1 or 2, wherein the ramp member (15.1) has between its low point and high point a substantially vertical section.
- 4. A pipette as set forth in claim 3, wherein the ramp member (15.1) has its ramp surface responded by a complementary surface (12.1) integral with the remover element (7.1).
- 5. A pipette as set forth in any of the preceding claims, which has a motor (13) for rotating the ramp member.
- 6. A pipette as set forth in any of the preceding claims, wherein the ramp member (15.1; 15.2; 15.3) has its ramp surface above the top end of the remover element (7.1; 7.3).
- 7. A pipette as set forth in any of the preceding claims, wherein the ramp member is rotatable about an axis substantially parallel to the moving direction of the remover element (7.1; 7.2).
- 8. A pipette as set forth in any of the preceding claims, which is provided with a manually operated element (4) or a motor (18) for operating the plunger.
- 9. A pipette tip removing mechanism for disengaging a tip from a pipette, said tip removing mechanism comprising a remover element (6.1, 7.1; 6.3, 7.3) which,

upon moving it against the tip, disengages the tip, characterized in that the tip removing mechanism is provided with a ramp member (15.1; 15.2; 15.3), which is rotatable by a motor and which has a circle-forming ramp surface, including one or more segments within which the ramp surface has a high point and a low point, whereby the ramp surface, upon rotating through a single segment, forces the remover element (6.1, 7.1; 6.3, 7.3) first to move against the tip and then allows it to return.

10. A method for removing a tip from a pipette, in which method the tip is pressed off by means of a remover element (6.1, 7.1; 6.3, 7.3) included in a tip removing mechanism, characterized in that the tip removing mechanism is operated by using a ramp member (15.1; 15.2; 15.3), which is rotatable by a motor about an axis parallel to the moving direction of the remover element and which has a circle-forming ramp surface, including one or more segments within which the ramp surface has a high point and a low point, whereby the ramp surface, upon rotating through a single segment, forces the remover element (6.1, 7.1; 6.3, 7.3) first to move against the tip and then allows it to return.